

ART. X.—*On the Structure of the Plants Nitella and Chara.*  
By THOMAS S. RALPH, ESQ., M.R.C.S., &c.

[Abstract of paper, original read 11th November, 1861.]

Mr. Ralph summarised the observations of others on the life and history of these plants, with a view to direct attention to their further study by microscopists, to whom they afforded excellent opportunities for studying many important vegetable phenomena. The paper was arranged under three heads: 1st. The structure of the globule and nucule, or reproductive parts of the plant; 2nd. The structure of the stem and rootlets, and the circulation therein displayed; 3rd. The nature of the animalculæ which were developed in connection with these plants.

He stated that the principal points to be attended to in the study of these plants, was to direct special attention to the circulation in the rootlets, and their mode of developing new cells, and that, in order to do this, it was needful to grow them, as he had been in the habit of doing, in small water cells, so that the changes exhibited in the growing parts might be readily noted. The other point was, to carry on still further the investigations of the growth of animalculæ in connection with these plants, a subject which had only recently been brought under the notice of students of Natural History.

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ART. XI.—*Remarks on a Filamentous Material, Grown upon the Plant "Cryptostemma Calendulaceum," believed to be suitable for Manufacturing Purposes.* By HENRY H. HAYTER, Esq.

[Read 11th November, 1861.]

I have here a sample of a fibrous substance I gathered in the Royal Park, from a plant which is very abundant in that locality, and which is also extremely common in most of the reserves and open spaces of ground in and around Melbourne. It bears a yellow flower, the appearance of which is doubtless well known to most of you. I produce a specimen of the plant which I picked from the reserve in which the hall of this Society stands. I have ascertained from the Government Botanist that the name